Team Nutritional Plan and Informational Binder

Sports Nutrition

Longwood Softball

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**Letter to Athletes**

Dear Longwood Softball Athletes,

This binder is an example of a correct nutritional plan for a seven-day period of workouts for your sport. Included is a brief background of your sport, including metabolic demands, and a nutritional outline for appropriate meal timing and meal content for a week of your in-season schedule. Although other options are available for content of meals, it is recommended to follow the outlined plan because it will give you the correct amount of proteins, carbohydrates, and fats for your metabolic needs as well as the correct time to consume these nutrients. Thank you for your time and consideration.

Jessica Smith

**Description of Sport (Needs Analysis)**

 Softball requires athletes to compete in a team versus team environment where there is a winner and loser. The possibility of ending in a tie is highly irregular, especially at the collegiate level. Each period, or game, is defined as a home team and away team being chosen (usually depending on which school is hosting), and competing against each other in a seven-inning game. The home team starts in the field and has the advantage of hitting last, meaning they have the last opportunity to score before the game ends. The away team starts hitting and has the advantage of getting ahead early by scoring first. These two teams play for three outs each and after three outs, they switch from hitting to fielding or vice versa. Many teams’ goal is to either get ahead first by about three runs or, if they get behind, to catch up and pass the other team by at least one run. If a team has a dominant pitcher, meaning the other team either cannot make contact or they mishit the ball, that team has a higher probability of winning the game. The best games are played with two dominant pitchers where defense and the lack of errors prove one team to be the winner.

 Each softball game takes about one-hour and fifty minutes. Many of these games are played as double-headers, meaning two games get played back-to-back with about a thirty minutes break in between. This leads to there being a max of 56 games per season. The Longwood Softball Team is playing 53 games this upcoming season with the hopes to add two more against Norfolk State University (Kathy Riley, Nov. 4, 2017). The reason there is so many games is because the metabolic demands of softball are not nearly as taxing as high intensity running sports, such as soccer.

 The metabolic demands for softball are mostly from ATP-PC, or anaerobically creating ATP with phosphocreatine (Mehter, 2011). The metabolic demands can vary depending on the position. For example, a third baseman is much more likely to use ATP-PC than an outfielder, who would probably create more ATP aerobically (2011). The reason that the ATP-PC system is utilized more is because that system is responsible for about eight seconds of power. When fielding a ball, an athlete usually has about three seconds to catch the ball and throw the runner out at first base utilizing their first response to work, stored ATP, and their second response, the ATP-PC system. In hitting, an athlete tends to run down first base, as stated above, in about three seconds. Even if the athlete ends up running to third base, which is highly unlikely in collegiate softball, she will still utilize mainly ATP-PC because it would take anywhere between eight and nine seconds. The athlete will only start using glycolysis when she either is running an in the park homerun or when an outfielder chases down a ball to the fence and then attempts to throw a runner out. Otherwise, the use of glycolysis is low.

 Three common injuries for softball players pertain to the legs, elbows, and shoulders. The softball athletic trainer for Longwood, Morgan Langton, stated that the most injury she sees is muscle strains in the quadriceps and hamstrings. The common elbow injury is the tearing or partial tearing of the UCL. Softball players at Longwood have, in the past, been known to have elbow injuries. For example, Glenn Walters, Jordan Clark, and Kelsey Sweeney all tore their UCL’s in the off season in the past three years. Morgan Langton does not know why Longwood players have a tendency to tear this ligament since is not the most common for all colleges, just Longwood. The third most common injury for softball players is in the shoulder. Tyler Wrenn, Longwood softball’s strength coach, stated that rotator cuff injuries are very common for baseball and softball. This is because the throwing motion puts strain on the rotator cuff in particular, causing it to move out of place or tear along the labrum.

**Sport Schedule**

Week of: 4/15/2018- 4/21/2018

|  |  |
| --- | --- |
| 4/15/2018 | Away game vs. PresbyterianGame time: 1 pmLocation: Clinton, SC |
| 4/16/2018 | **OFF DAY** |
| 4/17/2018 | Lift: 3-3:45 pmSoftball practice: 3:45- 6pm |
| 4/18/2018 | Away game vs. University of VAGame time: 6 pmLocation: Charlottesville, VA |
| 4/19/2018 | Lift: 3-3:45 pmSoftball practice: 3:45-6 pm |
| 4/20/2018 | Home game vs. WinthropGame time: 6 pmLocation: Farmville, VA |
| 4/21/2018 | Home Game vs. WinthropGame time: 1 pm and 3 pmLocation: Farmville, VA |

\*Tuesday lift will include heavy lifting movements such as a heavy back squat or heavy deadlift. It will focus more on high intensity, less repetitions.

\*Thursday’s lift will focus more on speed. This may include box jumps or body weight exercises. The purpose of this is to not make the athletes super sore going into a weekend playing conference teams. (Tyler Wrenn, Nov. 14, 2017)

**Nutritional Plan and Information**

10 Nutrition Guidelines for Softball Players

1. Eat every three hours
2. Have a recovery snack 30 minutes prior to training
3. Consume two-thirds of your nutrients before dinner
4. Choose long lasting carbohydrates (whole grain bread, brown rice, etc.)
5. Do not drink your calories (avoid lemonade, soda, sugary drinks)
6. Only drink Gatorade when the work out is high-intensity and longer than an hour
7. Eat different foods instead of the same things
8. Make sure you enjoy your nutrition plan
9. Meals should contain lean protein (chicken, seafood, eggs, etc.)
10. Make sure to eat breakfast

(SCAN/CPSDA Dieticians)

Eating Times

|  |  |
| --- | --- |
| 4/15/2018SundayAway Game | Breakfast: 9 am Lunch: 3 pm (after game is completed)Dinner: 7 pm (because of the late lunch)Snack: 1:30 pm (during game for quick replenishment) |
| 4/16/2018MondayOff | Breakfast: 8 amLunch: 12 pmDinner: 6 pmSnack: 3 pm |
| 4/17/2018TuesdayPractice | Breakfast: 8 amLunch: 12 pmDinner: 6:30 pmSnack: 2 pm (light before lift) |
| 4/18/2018WednesdayAway Game | Breakfast: 8 amLunch: 12 pmDinner: 8 pm (after game ends)Snack: 4 pm |
| 4/19/2018ThursdayPractice | Breakfast: 8 amLunch: 12 pmDinner: 6:30 pmSnack: 2 pm (before lift) |
| 4/20/2018FridayHome Game | Breakfast: 8 amLunch: 1 pmDinner: 8 pm (after game)Snack: 4 pm |
| 4/21/2018SaturdayHome Games | Breakfast: 8 amLunch: 11 amDinner: 6 pm (after games)Snack: 3 pm (between games) |

**Resting Energy Expenditure**

1652.38 calories

This was ascertained using the average weight, age, height, and body fat percentage.

Cunningham was chosen because usually athletes measure their caloric expenditure via Cunningham.

**Total Daily Energy Expenditure**

Caloric intake minus the caloric expenditure

Home Game: 4/20/18

1,663-2,478.57= -815.57

Away Game: 4/18/18

 1,826 -2,478.57= -652.57

Normal Day: 4/17/18

 1,458 -2,478.57= -1020.57

\*Activity Multiplier: 1.5 because these days are high intensity practice or games but not nearly as strenuous as a three-a-day practice, which usually occurs in the Fall

**Nutritional Plan**

4/17/18: Normal Practice Day

Breakfast: 8 am

Dorill Dining Hall (meal plan)

1. Scrambled Eggs: 280 calories
2. Vanilla Yogurt: 60 calories
3. Pineapple Chunks: 60 calories
4. Chocolate Milk: 178 calories

Lunch: 12 pm

Dorill Dining Hall (meal plan)

1. Chopped Fresh Spinach: 10 calories
2. Black Beans: 50 calories
3. Shredded Cheese: 110 calories
4. Balsamic Vinaigrette Dressing: 60 calories
5. Water to drink: 0 calories

Dinner: 6:30 pm

Dorill Dining Hall (meal plan)

1. Grilled Chicken Breast: 160 calories
2. Confetti Brown Rice: 120 calories
3. Peas: 100 calories
4. Water to drink: 0 calories

Snack: 2 pm

Walmart: $2.73

1. Peanuts: 170 calories

Snack: 8 pm

Walmart: $0.82

1. Yoplait Whipped Greek Yogurt: 100 calories

Rationale: This was for the normal day with a lift and a light softball practice. The goal was to hydrate for the game the next day so that’s why water was chosen to drink for two different meals. My main concern was protein content to help the athlete build muscle and stay full longer. The lunch is a smaller meal because she will have practice soon after. According to Softball Sports Nutrition, an article written by SCAN/CPSDA Dieticians, meals should be consumed three hours before practice so that was the goal for lunch today and other meals on game days. The snacks were chosen for protein content as well as not being heavy on the stomach.

4/18/18: Away Game Day

Breakfast: 8 am

Dorill Dining Hall

1. Scrambled Eggs: 280 calories
2. Strawberry Yogurt: 60 calories
3. Honey Granola: 110 calories
4. Chocolate Milk: 178 calories

Lunch: 12 pm

Dorill Dining Hall

1. Grilled Chicken Breast: 160 calories
2. Romaine Lettuce: 5 calories
3. Shredded Cheese: 110 calories
4. Garbanzo Beans: 60 calories
5. Lie Italian Dressing: 40 calories
6. Water to drink

Dinner: 8 pm

Take It Away in Charlottesville, VA

1. Roast Beef Sandwich: $6.48: 120 calories (19g of PRO)
2. Whole Wheat Bread: 120 calories
3. Cheddar Cheese (0.80): 115 calories
4. Water: 0 calories

Snack: 3 pm (on bus)

Packed from Dorill Dining Hall

1. Peanut Butter Sandwich: 188 calories
2. Wheat Bread: 120 calories

Supplement: In the first 30 minutes following game

1. Muscle Milk: 160 calories

Rationale: Today was an away game, so meals had to planned around travelling and the game. Since lunch could not be consumed within the recommended three hour period, a snack was eaten on the bus to make up for that. The goal again was to eat a lot of protein and carbohydrates because carbs are the most utilized for ATP synthase. The muscle milk is a likely supplement one because it has a high protein content and was recommended in the same article as mentioned above to drink in the first 30 minutes following games, and two because it is supplied to Longwood athletes already. Water was the drink of choice because head coach Kathy Riley only wants her athletes to drink water and also because the athletes need to stay hydrated as much as possible.

4/20/18: Home Game

Breakfast: 8 am

Dorill Dining Hall

1. Old Fashioned Oatmeal: 150 calories
2. Roasted Potatoes: 120 calories
3. Cantaloupe: 25 calories
4. Pineapple Chunks: 60 calories
5. Chocolate Milk: 178 calories

Lunch: 12 pm

Dorill Dining Hall

1. Grilled Chicken Herb Sandwich: 330 calories
2. Broccoli: 20 calories
3. Barley Vegetable Soup: 80 calories
4. Powerade: 130 calories

Dinner: 8 pm

Charley’s (in Farmville)

1. Baby Bella and Bruschetta Wrap ($10): 200 calories
2. Side: Chili ($2): 200 calories
3. Water

Snack: 11 am

1. Watermelon: 65 calories

Snack: 3 pm

1. Banana: 105 calories

Rationale: This day was the home game day. It is recommended to keep eating protein to stay full and build muscles and also to increase lean body mass. Coach would have taken the team to dinner so that is why Charley’s was chosen. The actual calorie count for dinner was not online so I looked on myfitness pal to find calorie counts. Watermelon is a good snack because it increases hydration but will not be heavy on the stomach. Bananas were chosen as the second snack because they are high in potassium, which is a nutrient usually lacking for athletes. Powerade was the change to the drinks because after a week long of games and practice, it is necessary for the athlete to replenish lost electrolytes.

The goals for all of these meals are to follow the team’s guidelines. Players are not allowed to eat fried chicken, white sauce, fast food, or anything to drink besides water unless specifically given permission. The players also must stay away from greasy protein such as sausage which is why scrambled eggs were the main protein choice for breakfast. (Kathy Riley, Nov. 4, 2017)

**Extra Meals/ Snacks/ Supplements**

Supplement: Beta Alanine

* A naturally occurring amino acid that can increase resistance to tiring and help increase muscle strength. Amino acids are very important in the diet and are usually lacking in the normal foods consumed.

Snack: Any fruit would be a good snack; they have glucose (simple or complex) that is necessary for ATP-PC and Glycolysis, the main metabolic ways to synthesize ATP for softball players. It is also pertinent for the athlete to regularly consume quick glucose if she feels lagging during the game for a quick energy booster.

References

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